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6. (Three Times Amended) The method according to Claim 29, wherein said [catalyst containing material] metal comprises one of Ni, Fe, Co, Pd and Pt.

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- 11. (Twice Amended) The method according to Claim 27 wherein said [catalyst containing material] metal is disposed by spin-coating.
- 12. (Amended) A method according to Claim 29 wherein said <u>metal</u> [catalyst containing material] is disposed by spin-coating.

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26. (Amended) The method of Claim 27 wherein said concentration of said <u>metal</u> [catalyst containing material] is measured by secondary ion mass spectrometry.

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27. (Amended) A method of manufacturing a semiconductor device comprising the steps of:

forming a semiconductor film to be crystallized over a substrate, said semiconductor film having a first region and a second region;

disposing a [catalyst] metal containing material in contact with a selected region of only the first region of the semiconductor film, said [catalyst] metal being capable of promoting crystallization of said semiconductor film;

heating said semiconductor film so that crystallization of said semiconductor film occurs only in the first region thereof while the semiconductor film in said second region is not crystallized, wherein said crystallization proceeds in a direction parallel to a major surface of said substrate from said selected region with diffusion of said [catalyst] metal through the semiconductor film, thereby forming crystals of said semiconductor film in said first region extending parallel with the major surface of the substrate; and

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patterning said semiconductor film in order to form a first semiconductor island consisting of the first region and a second semiconductor island consisting of the second region,

wherein a concentration of said [catalyst]  $\underline{\text{metal}}$  in said first region is 1 x  $10^{19}$  atoms/cm<sup>3</sup> or lower.

29. (Amended) A method of manufacturing a semiconductor device used for an active matrix type electro-optical display, comprising the steps of:

forming a semiconductor film to be crystallized over a substrate, said semiconductor film having a first region an a second region;

disposing a metal [catalyst containing material] in contact with a selected region of only the first region of the semiconductor film, said catalyst being capable of promoting crystallization of said semiconductor film;

heating said semiconductor film so that crystallization of said semiconductor film occurs only in the first region thereof while the semiconductor film in said second region is not crystallized, wherein said crystallization proceeds in a direction parallel to a major surface of said substrate from said selected region with diffusion of said metal [catalyst] through the semiconductor film, thereby forming crystals of said semiconductor film in said first region extending parallel with the major surface of the substrate; and

after the cystallization of said semiconductor film, forming a first thin film transistor by using said crystals of the semiconductor film and a second thin film transistor by using the second region of the semiconductor film,

wherein a concentration of said metal [catalyst] in said first region is 1 X 10<sup>19</sup> atoms/cm/ or lower, and

wherein the first thin film transistor is so arranged that said crystals extend along with a direction in which carriers of said first transistor flow.

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31. (Amended) A method of manufacturing a semiconductor device comprising the

steps of: forming a semiconductor film to be crystallized over a substrate, said semiconductor film having a first region and a second region;

 $disp \varphi sing \ a \ [catalyst] \ \underline{metal} \ containing \ material \ in \ contact \ with \ a \ selected \ region$ of only the first region of the semiconductor film, said [catalyst] metal being capable of promoting crystallitation of said semiconductor film;

heating said semiconductor film so that crystallization of said semiconductor film occurs only in the first region thereof while the semiconductor film in said second region is not crystallized, wherein said crystallization proceeds in a direction parallel to a major surface of said substrate from said selected region with diffusion of said [catalyst] metal through the semiconductor film, thereby forming crystals of said semiconductor film in said first region extending parallel with the major surface of the

substrate; and

patterning said semiconductor film in order to form a first semiconductor island consisting of the first region and a second semiconductor island consisting of the second region,

wherein a quocentration of said [catalyst]  $\underline{\text{metal}}$  in said first region is 1 x  $10^{19}$ atoms/cm3 or lower, and

wherein a concentration of said [catalyst] metal in said second region is lower than that in said first region

33. (Amended) A method of manufacturing a semiconductor device comprising the steps of:

forming a semiconductor film to be crystallized over a glass substrate having a glass strain point of 593  $\,^\circ d$  or less, said semiconductor film having a first region and a second region;

disposing a [catalyst] <u>metal</u> containing material in contact with a selected region of only the first region of the semiconductor film, said [catalyst] <u>metal</u> being capable of promoting crystall zation of said semiconductor film;

heating said semiconductor film so that crystallization of said semiconductor film occurs only in the first region thereof while the semiconductor film in said second region is not crystallized, wherein said crystallization proceeds in a direction parallel to a major surface of said substrate from said selected region with diffusion of said [catalyst] metal through the semiconductor film, thereby forming crystals of said semiconductor film in said first region extending parallel with the major surface of the substrate; and

patterning said semiconductor film in order to form a first semiconductor island consisting of the first region and a second semiconductor island consisting of the second region,

wherein a concentration of said [catalyst]  $\underline{\text{metal}}$  in said first region is  $1 \times 10^{19}$  atoms/cm<sup>3</sup> or lower.

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35. (Amended) A method according to Claim 33 wherein said [catalyst containing material comprises one of] metal is selected from the group consisting of Ni, Fe, Co, Pd and Pt.

36. (Amended) A method of manufacturing a semiconductor device for an active matrix type electro-optical display having a driving circuit portion and a display portion comprising the steps of:

forming a semiconductor film to be crystallized over a substrate, said semiconductor film having a first region on said driving circuit region and a second region on said display portion;

disposing a <u>metal</u> [catalyst containing material] in contact with a selected region of only the first region of the semiconductor film, said [catalyst] <u>metal</u> being capable of promoting crystallization of said semiconductor film;

heating said semiconductor film so that crystallization of said semiconductor film occurs only in the first region thereof while the semiconductor film in said second region is not crystallized, wherein said crystallization proceeds in a direction parallel to a major surface of said substrate from said selected region with diffusion of said [catalyst] metal through the semiconductor film, thereby forming crystals of said semiconductor film in said first region extending parallel with the major surface of the substrate; and

after the crystallization of said semiconductor film, forming a first thin film transistor by using said crystals of the semiconductor film and a second film transistor by using the second region of the semiconductor film, and

wherein a concentration of said [catalyst] metal said first region is 1 X 10<sup>19</sup> atoms/cm<sup>3</sup> or lower.

38. (Amended) A method according to Claim 36 wherein said [catalyst containing material] metal comprises one of Ni, Fe, Co, Pd and Pt.

39. (Amended) A method of manufacturing a semiconductor device for an active matrix type electro-optical display having a driving circuit portion and a display portion comprising the steps of:

forming a semiconductor film to be crystallized over a substrate, said semiconductor film having a first region on said driving circuit portion and a second region on said display portion;

disposing a <u>metal</u> (catalyst containing material] in contact with a selected region of only the first region of the semiconductor film, said [catalyst] <u>metal</u> being capable of promoting crystallization of said semiconductor film;

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heating said semiconductor film so that crystallization of said semiconductor film occurs only in the first region thereof while the semiconductor film in said second region is not crystallized, wherein said crystallization proceeds in a direction parallel to a major surface of said substrate from said selected region with diffusion of said [catalyst] metal through the semiconductor film, thereby forming crystals of said semiconductor film in said first region extending parallel with the major surface of the substrate; and

after the crystallization of said semiconductor film, forming a first thin film transistor by using said crystals of the semiconductor film and a second thin film transistor by using the second region of the semiconductor film,

wherein a concentration of said [catalyst]  $\underline{\text{metal}}$  in said first region is 1 X  $10^{19}$  atoms/cm³ or lower, and

wherein said first thin film transistor is so arranged that said crystals extend along with a direction in which carriers of said first transistor flow.

41. (Amended) A method according to Claim 39 wherein said [catalyst containing material] metal comprises one of Ni, Fe, Co., Pd, and Pt.

42. (Amended) A method of manufacturing a semiconductor device comprising the steps of:

forming a semiconductor film to be crystallized over a substrate, said semiconductor film having a first region and a second region;

disposing a [calalyst] <u>metal</u> containing material in contact with a selected region of only the first region of the semiconductor film, said [catalyst] <u>metal</u> being capable of promoting crystallization of said semiconductor film;

heating said semi-conductor film so that crystallization of said semiconductor film occurs only in the first region thereof while the semiconductor film in said second region is not crystallized, wherein said crystallization proceeds in a direction parallel to a major

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surface of said substrate from said selected region with diffusion of said [catalyst] metal through the semiconductor film, thereby forming crystals of said semiconductor film in said first region extending parallel with the major surface of the substrate; and

patterning said semiconductor film in order to form a first semiconductor island consisting of the first region and a second semiconductor island consisting of the second region,

wherein a concentration of said [catalyst]  $\underline{metal}$  in said first region is  $1\times 10^{19}$  atoms/cm³ or lower, and

wherein said farst region and said second region each includes hydrogen.

44. (Amended) A method according to Claim 42 wherein said [catalyst containing material comprises one of] metal is selected from the group consisting of Ni, Fe, Co, Pd and Pt.

## Please add the following new claims 67-75.

--67. The method according to claim 27 wherein said concentration of said metal in and first region is more than  $1 \times 10^{19}$  atoms/cm<sup>3</sup>.

- 68. The method according to claim 29 wherein said concentration of said metal in said first region is more than  $1\times10^{19}$  atoms/cm<sup>3</sup>.
- 69. The method according to claim 31 wherein said concentration of said metal in said first region is more than 1  $\times$  10<sup>15</sup> atoms/cm<sup>3</sup>.
- 70. The method according to claim 33 wherein said concentration of said metal in said first region is more than 1  $\times$  10<sup>15</sup> atoms/cm<sup>3</sup>.

- 71. The method according to claim 36 wherein said concentration of said metal in said first region is more than 1  $\times$  10<sup>15</sup> atoms/cm<sup>3</sup>.
- 72. The method according to claim 39 wherein said concentration of said metal in said first region is more than  $1 \times 10^{15}$  atoms/cm<sup>3</sup>.
- 73. The method according to claim 42 wherein said concentration of said metal in said first region is more than 1  $\times$  10<sup>15</sup> atoms/cm<sup>3</sup>.
- The method according to claim 45 wherein said concentration of said nickel in said first region is more than 1 X 10<sup>15</sup> atoms/cm<sup>3</sup>.
- 75. The method according to claim 47 wherein said concentration of said nickel in said first region is more than 1  $\times$  10<sup>15</sup> atoms/cm<sup>3</sup>.--

## REMARKS

This Amendment amends claims 5-6, 11-12, 26, 27, 29, 31, 33, 35-36, 38, 39, 41-42 and 44 and adds new claims 67-75. Claims 5-12, 16, 19 and 26-75 are pending. Claims 27, 29, 31, 33, 36, 39, 42, 45, 49, 52, 55, 58, 61 and 64 are independent. Claims 49-66 have been withdrawn from examination.

The Office Action rejects claims 5-8, 11-12, 16, 19 and 27-48 under 35 U.S.C. Section 103(a) over Oka, Liu et al., Kuznetsov and Kumomi; claims 9-10 under 35 U.S.C. Section 103(a) over Oka, Liu et al., Kuznetsov, Kumomi and further in view of Yonehara and or Shibata; and claim 26 under 35 U.S. S Section 103(a) over Oka, Liu et al., Kuznetsov and